

# Up to Code, Down to Design

Mastering Access & Mobility Standards for Your Hinged and Sliding Doors.



[www.criterionindustries.com.au](http://www.criterionindustries.com.au)

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 **Criterion**

## Why 'Equitable Access' Matters for Today's Building Designs

Recent changes to Australia's Access and Mobility Code† (AS1428, 2010) demand rigorous design and construction standards for all new public access buildings. In full compliance with Australia's Disability Discrimination Act (1992) and the Building Code of Australia, the Access and Mobility Code (A&M) endeavours to provide 'safe, equitable and dignified access to buildings, services and facilities within a building', and safeguard occupants from illness or injury during emergency evacuation<sup>1</sup>. The A&M guides architects and builders in delivering minimum design requirements for new building work, enabling unimpeded access for all occupants and visitors regardless of physical or sensory impairment<sup>2</sup>. However, despite ethical and legal implications, it appears that in far too many cases these requisite standards are not being met<sup>3</sup>.

## Door Standard Compliance - The Importance of Getting it Right First Time, Every Time

The ostensibly simple act of opening doors can be extremely difficult for people with disabilities<sup>4</sup>. Indeed, many existing door systems require excessive forces to push/pull open, inhibiting the free movement of occupants and visitors. It is imperative that architects, designers, builders and certifiers meet at least the minimum specifications of the A&M. Failure to comply with the standards may not only jeopardise your project, but leave you liable for the costs of retrofitting doorways to code.

**“Despite ethical and legal implications, it appears that in far too many cases requisite standards for access are not being met”**



## Requirements of the Access and Mobility Code (A&M)

The A&M outlines specific design requirements for all new building work, driven by a basic philosophy of delivering the greatest level of access to the greatest number of people<sup>5</sup>. Particular attention is given to providing:

- (a) continuous accessible paths of travel and circulation spaces for people who use wheelchairs;
- (b) access and facilities for people with ambulatory (i.e. movement) disabilities; and
- (c) access for people with sensory disabilities.<sup>6</sup>

To comply with A&M's strict standards, three key factors must be addressed for each access point:

- 1) luminance contrast;
- 2) spatial dimensions;
- 3) operational force (or force required to open/close door).

# Down to Design

## Luminance Contrast

Luminance contrast is the difference in the amount of light reflected from one building element to another<sup>7</sup>. It is a crucial provision for vision-impaired occupants, delineating clear visual contrasts between all elements of the door system, including door frames, jambs and glazed surfaces. Visual indicators are particularly important on glass doors and sidelights, informing individuals to the presence of fully glazed panels in the path of travel. The A&M stipulates that all new doorways require a minimum luminance contrast of 30% between:

- a) door leaf and jamb
- b) door leaf and adjacent wall
- c) architrave and wall
- d) door leaf and architrave
- e) door jamb and adjacent wall

A minimum 50mm width area of luminance contrast is a strict requirement on all new doorways.

## Spatial Dimensions

Optimum doorframe dimensions ensure a continuous accessible path for all users, particularly those in wheelchairs or scooters.

The following spatial criteria are required to meet A&M standards:

- 1) a minimum 850mm clear opening across the doorway;
- 2) circulation spaces allowing wheelchair users to reach door handles unencumbered and to manoeuvre easily through doorway (N.B: refer to AS1428 for distinct measurement requirements);
- 3) a gradient and crossfall no steeper than 1 in 40 (2.5%) across doorway circulation space.

## Operational Force

A prime consideration for accessible design is the provision of appropriate and functional door controls. Poorly selected door fittings and cumbersome door designs can prevent those with hand or arm impairments from operating doors effectively, and could cause injury. Architects must therefore be mindful of the operational forces required for equitable access.

The A&M establishes several mandatory design features for optimal door operation:

- 1) forces required to operate the door where a door closer is fitted (open, close or hold door) must not exceed 20N (excepting fire and smoke doors);
- 2) door handles and related hardware must allow door to be unlocked with one hand; handles should allow persons with limited grip capacities to hold handles without slippage during operation of the latch';
- 3) 'D-Type' (or 'D-Pull') handles must be used on sliding doors.



# The Criterion Solution

## The Perfect Fit for Your Doorway Project - The Criterion Solution

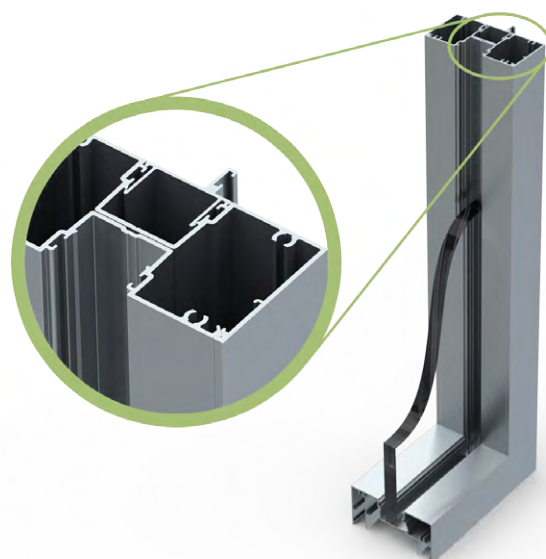
Since 1981, Criterion has been one of Australia's leading manufacturers of internal doors and partitioning systems. As a major supplier to both government and commercial construction projects – including the Australian Defence Force (ADF), ASIC, Victoria Police, and several major hospitals – you can be assured that high quality and a detailed approach are cornerstones of Criterion. Uniquely, Criterion has designed door and aluminium systems to achieve full compliance with the Design for Access and Mobility Code (AS1428).

**The Niagara Sliding Track System** has been rigorously tested, delivering a consistent operational force of 19.5N for 100kg doors (below required A&M stipulations). The Niagara sliding door system simplifies a complex task. Featuring a removable pelmet, this ensures easy access to rollers. The aluminum comes in a vast array of prefinished colours and a neat fitting end cap. This heavy duty track system is one of the most reliable and hard wearing systems available. It is being used extensively throughout corporate fitouts because of its ability to accommodate a range of doors. With the roller assembly boasting smooth, ball bearing wheels that can take up to 250kg – you can be assured it will suit all your requirements.

### Features of Niagara

- Removable pelmet for easy access of Roller Assemblies
- End Cap for neat finish
- Capacity of up to 250kg
- Smooth and reliable
- Door thickness of 44mm

**The Definium Suite**, a bold centrepiece of Criterion's robust aluminium partition range, complies fully with both the A&M and Glazing Code (AS1288). This ensures Definium door jambs meet the minimum area width of 50mm luminance contrast, and conforms to the Glazing Code for glass up to 15mm thick.



Criterion's Definium Suite offers a 50mm reveal presenting a bold, flexible and defined internal wall solution. A fully integrated partitioning system that complies with glazing and disabled requirements, the Definium Suite combines consistent design throughout plasterboard walls, windows and door frames. This Suite includes centre, offset and double glazing options. The carefully designed and engineered heavy duty door frame, with three point fixing design, ensures door jambs withstand high levels of activity and remain maintenance free.

Criterion is dedicated to helping industry partners with a complete range of internal frame solutions – single, offset and double-glazing and heavy duty door frames – delivering matchless quality for all fit-outs.

[1] Australian Building Codes Board, "National Construction Code Training Program", Module 5:  
[http://www.abcb.gov.au/major-initiatives/~media/Files/Download%20Documents/Education%20and%20Training/Resource%20Kits/Module\\_Five\\_Disability\\_Access\\_Presentation.pdf](http://www.abcb.gov.au/major-initiatives/~media/Files/Download%20Documents/Education%20and%20Training/Resource%20Kits/Module_Five_Disability_Access_Presentation.pdf)

[2] Australian Standard Design for Access and Mobility; Preface

[3] Australian Human Rights Commission, "The good, the bad and the ugly – design and construction for access", Issue 7: Door Opening Requirements:  
<http://www.humanrights.gov.au/publications/good-bad-and-ugly-design-and-construction-access-0#issue7>

[4] *ibid.*

[5] Australian Building Codes Board, "National Construction Code Training Program", Module 5:

[http://www.abcb.gov.au/major-initiatives/~media/Files/Download%20Documents/Education%20and%20Training/Resource%20Kits/Module\\_Five\\_Disability\\_Access\\_Presentation.pdf](http://www.abcb.gov.au/major-initiatives/~media/Files/Download%20Documents/Education%20and%20Training/Resource%20Kits/Module_Five_Disability_Access_Presentation.pdf)

[6] Australian Standard Design for Access and Mobility

[7] Equal Access, "Luminance contrast principles":

<http://www.disabilityaccessconsultants.com.au/luminance-testing/>

† Please Note: this paper is not intended to cover the full scope of the Mobility and Accessibility Code (AS1428). For a full breakdown of A&M stipulations, please refer directly to the standards at: <http://www.saiglobal.com/Information/Standards/>



## New Definium Suite.

Definium Suite offers a 50mm reveal presenting a bold, flexible and defined internal wall solution. A fully integrated partitioning system that complies with the following codes and Australian Standards;

- AS1428 - 2010 Access and Mobility Code
- AS1288 - 2006 Glazing Code.



## New Niagara Sliding System.

Niagara Sliding Track System has recently been tested and exceeded for weight, force and endurance.

- Weight Capacity - 250kg
- Endurance - 12,000 cycles
- Force - 19.5N for 100kg doors



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